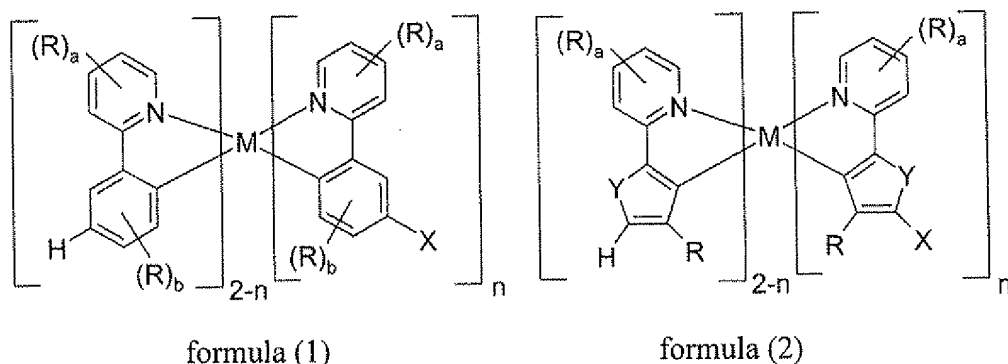


# AMENDMENTS TO THE CLAIMS

1. (Currently amended) A compound of the ~~formula (1) and (2)~~ formula (1) or (2)



where the symbols and indices are each defined as follows:

M is Pd or Pt;

X is Cl, Br or I;

Y is O, S, Se or NR<sup>1</sup>;

R is the same or different at each instance and is H, F, Cl, Br, I, NO<sub>2</sub>, CN, a straight-chain or branched or cyclic alkyl or alkoxy group having 1 to 20 carbon atoms, in which one or more nonadjacent CH<sub>2</sub> groups may be replaced by -O-, -SiR<sup>1</sup><sub>2</sub>-, -S-, -NR<sup>1</sup>- or -CONR<sup>1</sup>- and in which one or more hydrogen atoms may be replaced by F, or an aryl or heteroaryl group having from 4 to 14 carbon atoms which may be substituted by one or more nonaromatic R radicals, and a plurality of R substituents, either on the same ring or on the two different rings, may together in turn form one further aliphatic or aromatic, mono- or polycyclic ring system;

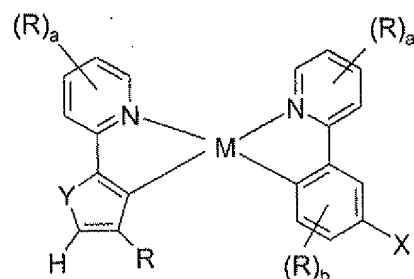
R<sup>1</sup> are the same or different at each instance and are each H or an aliphatic or aromatic hydrocarbon radical having from 1 to 20 carbon atoms;

a is 0, 1, 2, 3 or 4;

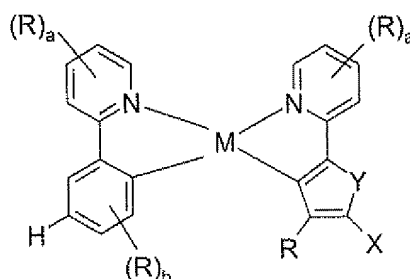
b is 0, 1, 2 or 3; and

n is 1 or 2.

2. (Currently amended) A compound of the ~~formula (1a) and (2a)~~ formula (1a) or (2a)



**formula (1a)**



**formula (2a)**

where the symbols and indices are each defined as follows:

M is Pd or Pt;

X is Cl, Br or I;

Y is O, S, Se or NR<sup>1</sup>;

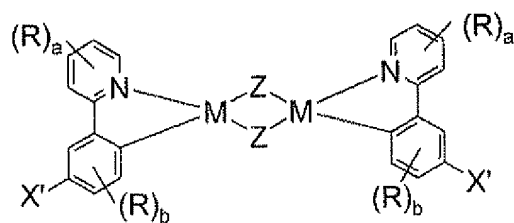
R is the same or different at each instance and is H, F, Cl, Br, I, NO<sub>2</sub>, CN, a straight-chain or branched or cyclic alkyl or alkoxy group having 1 to 20 carbon atoms, in which one or more nonadjacent CH<sub>2</sub> groups may be replaced by -O-, -SiR<sup>1</sup><sub>2</sub>-, -S-, -NR<sup>1</sup>- or -CONR<sup>1</sup>- and in which one or more hydrogen atoms may be replaced by F, or an aryl or heteroaryl group having from 4 to 14 carbon atoms which may be substituted by one or more nonaromatic R radicals, and a plurality of R substituents, either on the same ring or on the two different rings, may together in turn form one further aliphatic or aromatic, mono- or polycyclic ring system;

R<sup>1</sup> are the same or different at each instance and are each H or an aliphatic or aromatic hydrocarbon radical having from 1 to 20 carbon atoms;

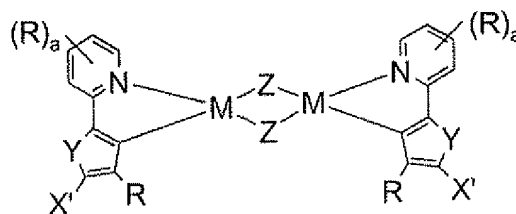
a is 0, 1, 2, 3 or 4;

b is 0, 1, 2 or 3.

3. (Currently amended) A compound of the ~~formula (3) and (4)~~ formula (3) or (4)



**formula (3)**



**formula (4)**

where the symbols and indices are each defined as follows:

M is Pd or Pt;

X' is H, Cl, Br or I, with the proviso that at least one X' per formula is selected from Cl, Br or I;

Y is O, S, Se or NR<sup>1</sup>;

Z is identically F, Cl, Br, I, O-R<sup>1</sup>, S-R<sup>1</sup> or N(R<sup>1</sup>)<sub>2</sub>;

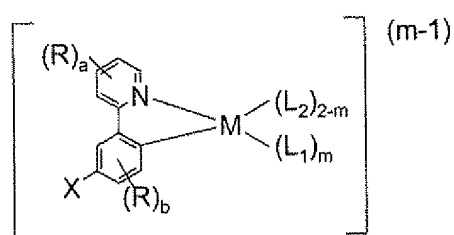
R is the same or different at each instance and is H, F, Cl, Br, I, NO<sub>2</sub>, CN, a straight-chain or branched or cyclic alkyl or alkoxy group having 1 to 20 carbon atoms, in which one or more nonadjacent CH<sub>2</sub> groups may be replaced by -O-, -SiR<sup>1</sup><sub>2</sub>-, -S-, -NR<sup>1</sup>- or -CONR<sup>1</sup>- and in which one or more hydrogen atoms may be replaced by F, or an aryl or heteroaryl group having from 4 to 14 carbon atoms which may be substituted by one or more nonaromatic R radicals, and a plurality of R substituents, either on the same ring or on the two different rings, may together in turn form one further aliphatic or aromatic, mono- or polycyclic ring system;

R<sup>1</sup> are the same or different at each instance and are each H or an aliphatic or aromatic hydrocarbon radical having from 1 to 20 carbon atoms;

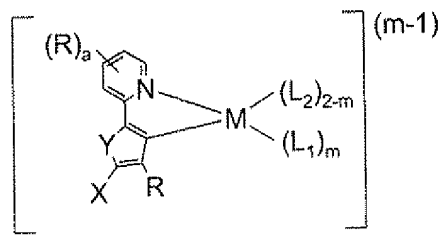
a is 0, 1, 2, 3 or 4; and

b is 0, 1, 2 or 3.

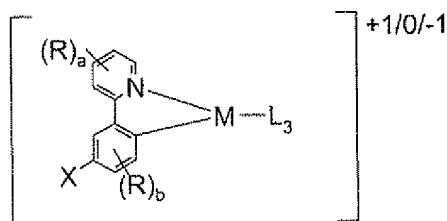
4. (Currently amended) A compound of the ~~formula (5), (6), (7) and (8)~~, formula (5), (6), (7) or (8)



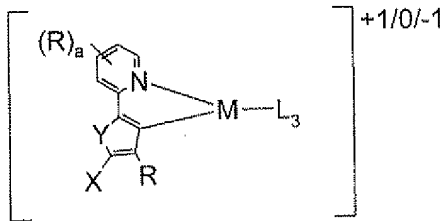
**formula (5)**



**formula (6)**



**formula (7)**



**formula (8)**

where the symbols and indices are each defined as follows:

M is Pd or Pt;

X is Cl, Br or I;

Y is O, S, Se or NR<sup>1</sup>;

R is the same or different at each instance and is H, F, Cl, Br, I, NO<sub>2</sub>, CN, a straight-chain or branched or cyclic alkyl or alkoxy group having 1 to 20 carbon atoms, in which one or more nonadjacent CH<sub>2</sub> groups may be replaced by -O-, -SiR<sup>1</sup><sub>2</sub>-, -S-, -NR<sup>1</sup>- or -CONR<sup>1</sup>- and in which one or more hydrogen atoms may be replaced by F, or an aryl or heteroaryl group having from 4 to 14 carbon atoms which may be substituted by one or more nonaromatic R radicals, and a plurality of R substituents, either on the same ring or on the two different rings, may together in turn form one further aliphatic or aromatic, mono- or polycyclic ring system;

R<sup>1</sup> are the same or different at each instance and are each H or an aliphatic or aromatic hydrocarbon radical having from 1 to 20 carbon atoms;

L<sub>1</sub> is an uncharged, monodentate ligand;

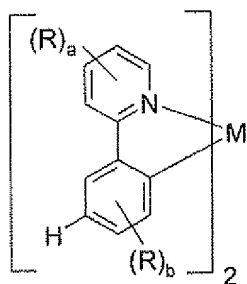
L<sub>2</sub> is a monoanionic, monodentate ligand;

L<sub>3</sub> is an uncharged or mono- or dianionic bidentate ligand;

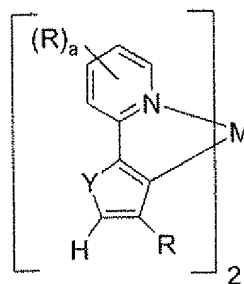
a is 0, 1, 2, 3 or 4;

- b is 0, 1, 2 or 3; and  
m is 0, 1 or 2.

5. (Previously presented) A compound as claimed in claim 4, characterized in that  $L_1$  is carbon monoxide, an isonitrile, an amine, morpholine, phosphine, aliphatic, aromatic or heteroaromatic phosphines, phosphate, arsine, stibine, or a nitrogen-containing heterocycle.
6. (Previously presented) A compound as claimed in claim 4, characterized in that  $L_2$  is a halide, cyanide, cyanate, isocyanate, thiocyanate, isothiocyanate, an alkoxide, methanethiolate, ethanethiolate, propanethiolate, isopropanethiolate, tert-thiobutoxide, thiophenoxide, an amide, a carboxylate, propionate, benzoate, or an anionic nitrogen-containing heterocycle.
7. (Previously presented) A compound as claimed in claim 4, characterized in that  $L_3$  is a diamine, cis-, trans-diaminocyclohexane, cis-, trans- $N,N,N',N'$ -tetramethyldiaminocyclohexane, imine, diimine, diphosphine, heterocycles containing two nitrogen atoms, 1,3-diketonates derived from 1,3-diketones, 3-ketonates derived from 3-keto esters, carboxylates derived from aminocarboxylic acids, salicyliminates derived from salicylimines, dialkoxides derived from dialcohols, dithiolates derived from dithiols heteroarylborate.
8. (Original) A process for preparing the compounds defined in claim 1, by reacting the compounds (9) or (10)



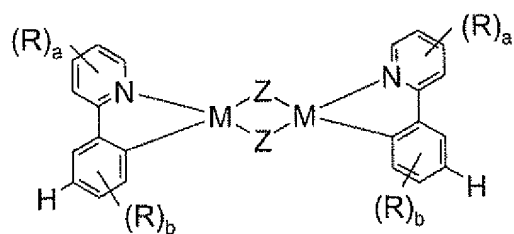
**compounds (9)**



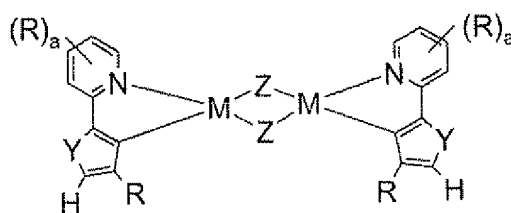
**compounds (10)**

in which M and the radicals and indices Y, R,  $R^1$ , a and b are each as defined in claim 1 with halogenating agents and subsequently reducing them.

9. (Original) A process for preparing the compounds defined in claim 3, by reacting the compounds (11) or (12)



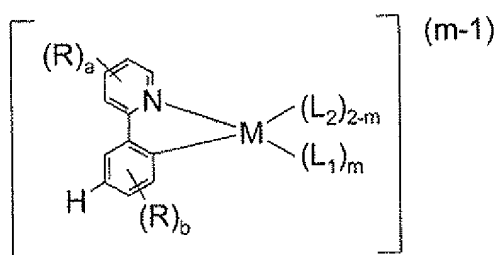
**compounds (11)**



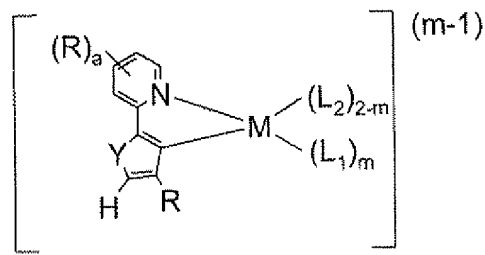
**compounds (12)**

in which M and the radicals and indices Z, Y, R, R<sup>1</sup>, a and b are each as defined in claim 3 with halogenating agents and subsequently reducing them.

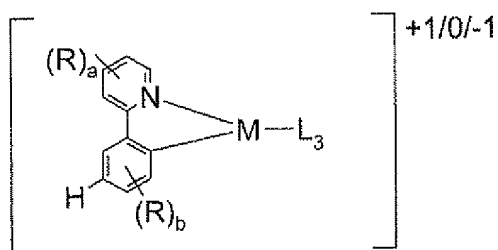
10. (Previously presented) A process for preparing the compounds defined in claim 4, by reacting the compounds (13), (14), (15) or (16),



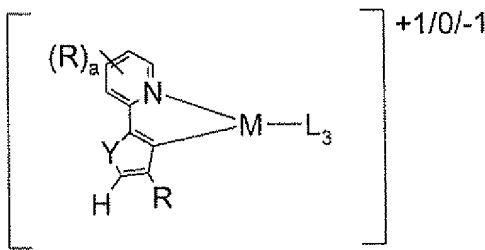
**compounds (13)**



**compounds (14)**



**compounds (15)**



**compounds (16)**

in which M and the radicals and indices L<sub>1</sub>, L<sub>2</sub>, L<sub>3</sub>, Y, R, R<sup>1</sup>, a, b and m are each as defined in claim 4, with halogenating agents and subsequently reducing them.

11. (Previously presented) The process as claimed in claim 8, characterized in that the halogenating agent used is a halogen  $X_2$  or an interhalogen  $X-X$  and a base in a molar ratio of from 1:1 to 1:100, or an organic bromine complex such as pyridinium perbromide, and in each case optionally a Lewis acid in a molar ratio (halogen to Lewis acid) of from 1:0.1 to 1:0.0001.

12. (Previously presented) The process as claimed in claim 8, characterized in that the halogenating agent used is an organic N-Hal compound.

13. (Previously presented) The process as claimed in claim 8, characterized in that the halogenating agent used comprises organic O-Hal compounds and halogens  $X_2$  in a molar ratio of from 0.5:1 to 1:1.

14. (Previously presented) The process as claimed in claim 11, characterized in that a stoichiometric ratio of the halogenating agents as claimed in claim 11 based on the content of active halogen, to the compounds (9) and (10), of 2:1 is used.

15. (Previously presented) The process as claimed in claim 11, characterized in that a stoichiometric ratio of the halogenating agents as claimed in claim 11, based on the content of active halogen, to the compounds (9) and (10), of from 3:1 to 1000:1 is used.

16. (Previously presented) The process as claimed in claim 11, characterized in that a reducing agent is added to the reaction mixture in a molar ratio of from 1:1 to 10 000:1 based on the compounds (9) and (10), and the addition is effected simultaneously with the addition of the halogenating agents (I), (II) or (III), or after a time delay.

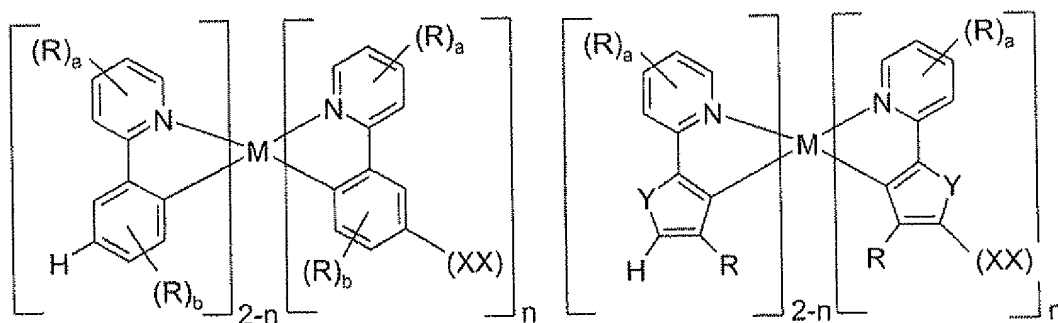
17. (Previously presented) The process as claimed in claim 11, characterized in that the reducing agent used is hydrazine (hydrate) or salts thereof, hydroxylamine or salts thereof, hydroxylamine-O-sulfonic acid and hydroquinones, alkali metal and alkaline earth metal sulfites,

alkali metal and alkaline earth metal dithionites, alkali metals and alkaline earth metals and their amalgams and other corresponding alloys, transition metals such as manganese, iron, nickel and zinc, and transition metal alloys.

18. (Previously presented) The process as claimed in claim 11, characterized in that the reduction may also be effected by dry-heating, under reduced pressure, the palladium(IV) or platinum(VI) compounds which have been formed as intermediates and isolated in substance.

19. (Previously presented) A compound as claimed in claim 1, characterized in that its purity (determined by means of  $^1\text{H}$  NMR or HPLC) is more than 99%.

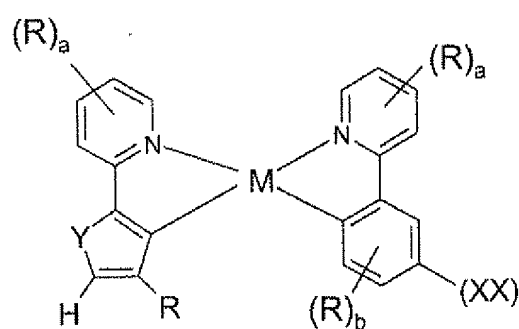
20. (Currently amended) A conjugated or semiconjugated or nonconjugated polymer containing one or more compounds of the formula (1') and/or (2')



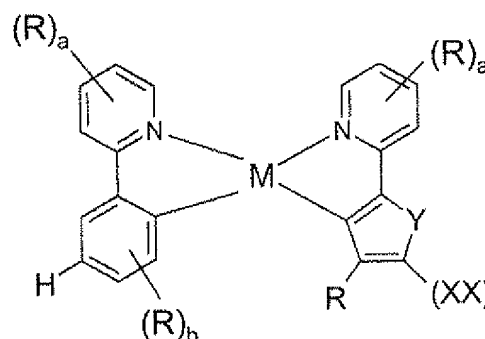
**formula (1')**

**formula (2')**

and/or of the formula (1a') and/or (2a')



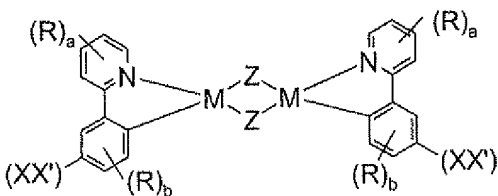
**formula (1a')**



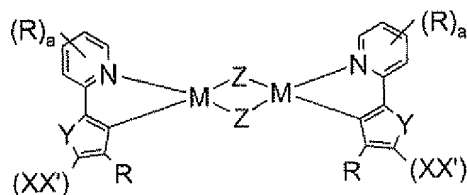
**formula (2a')**



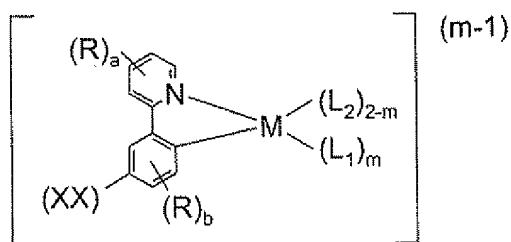
and/or of the formula (3'), (4'), (5'), (6'), (7') and/or (8')



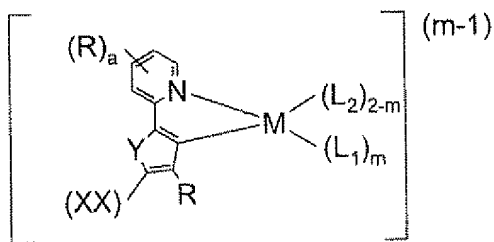
**formula (3')**



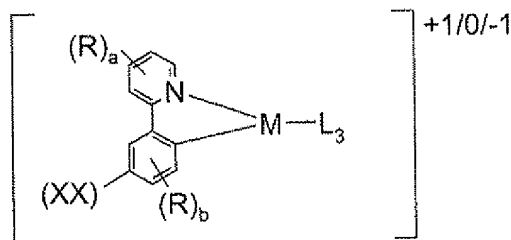
**formula (4')**



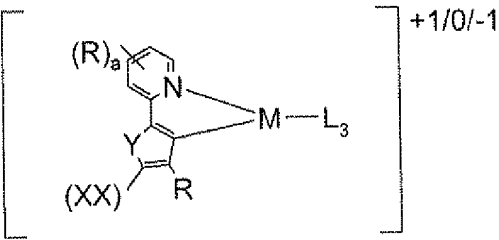
**formula (5')**



**formula (6')**



**formula (7')**



**formula (8')**

where the symbols and indices are each defined as follows:

M is Pd or Pt;

Y is O, S, Se or NR<sup>1</sup>;

R is the same or different at each instance and is H, F, Cl, Br, I, NO<sub>2</sub>, CN, a straight-chain or branched or cyclic alkyl or alkoxy group having 1 to 20 carbon atoms, in which one or more nonadjacent CH<sub>2</sub> groups may be replaced by -O-, -SiR<sup>1</sup><sub>2</sub>-, -S-, -NR<sup>1</sup>- or -CONR<sup>1</sup>- and in which one or more hydrogen atoms may be replaced by F, or an aryl or heteroaryl

group having from 4 to 14 carbon atoms which may be substituted by one or more nonaromatic R radicals, and a plurality of R substituents, either on the same ring or on the two different rings, may together in turn form one further aliphatic or aromatic, mono- or polycyclic ring system;

$R^1$  are the same or different at each instance and are each H or an aliphatic or aromatic hydrocarbon radical having from 1 to 20 carbon atoms;

$L_1$  is an uncharged, monodentate ligand;

$L_2$  is a monoanionic, monodentate ligand;

$L_3$  is an uncharged or mono- or dianionic bidentate ligand;

a is 0, 1, 2, 3 or 4;

b is 0, 1, 2 or 3;

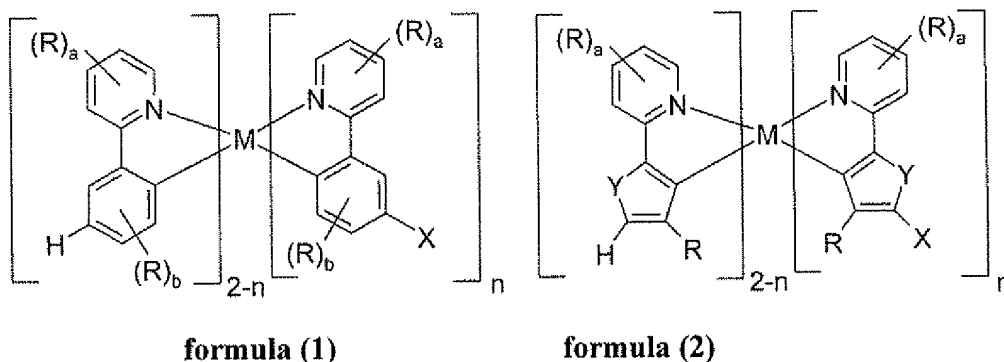
m is 0, 1 or 2;

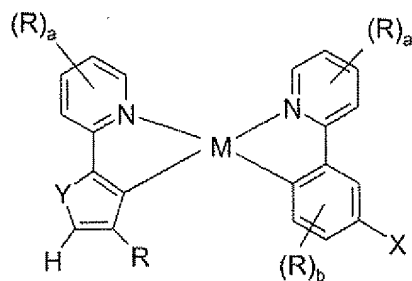
n is 1 or 2;

(XX) is a bond to the conjugated or semiconjugated or nonconjugated polymer;

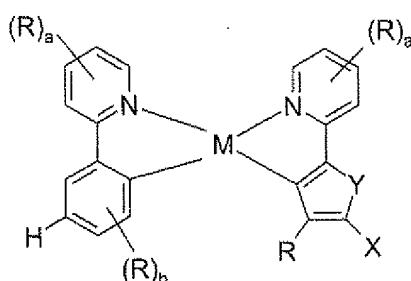
(XX') is H or a bond to the conjugated or semiconjugated or nonconjugated polymer, but at least one (XX') per formula is a bond to the conjugated or semiconjugated or nonconjugated polymer.

21. (Previously presented) A polymer as claimed in claim 20, characterized in that it has been obtained using one or more compounds of the formula (1), (1a), (2), (2a) and/or (3) to (8)

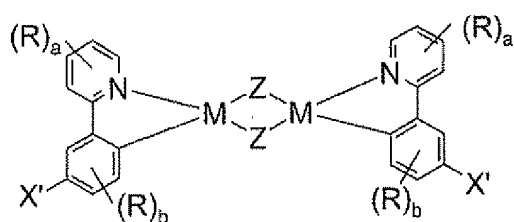




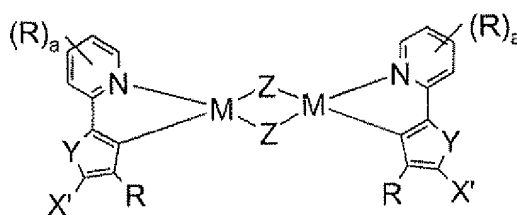
**formula (1a)**



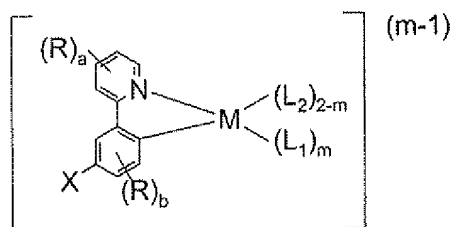
**formula (2a)**



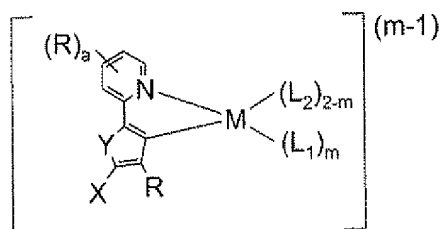
**formula (3)**



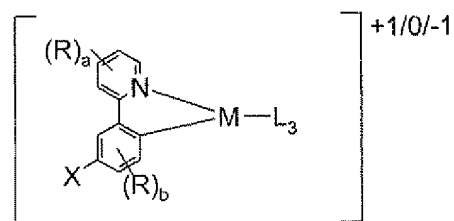
**formula (4)**



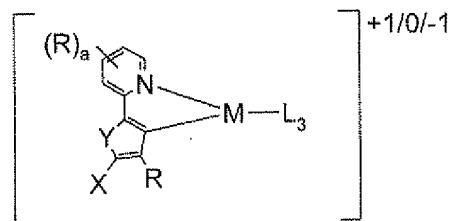
**formula (5)**



**formula (6)**



**formula (7)**



**formula (8)**

where the symbols and indices are each defined as follows:

- M is Pd or Pt;
- X is Cl, Br or I;
- Y is O, S, Se or NR<sup>1</sup>;
- R is the same or different at each instance and is H, F, Cl, Br, I, NO<sub>2</sub>, CN, a straight-chain or branched or cyclic alkyl or alkoxy group having 1 to 20 carbon atoms, in which one or more nonadjacent CH<sub>2</sub> groups may be replaced by -O-, -SiR<sup>1</sup><sub>2</sub>-, -S-, -NR<sup>1</sup>- or -CONR<sup>1</sup>- and in which one or more hydrogen atoms may be replaced by F, or an aryl or heteroaryl group having from 4 to 14 carbon atoms which may be substituted by one or more nonaromatic R radicals, and a plurality of R substituents, either on the same ring or on the two different rings, may together in turn form one further aliphatic or aromatic, mono- or polycyclic ring system;
- R<sup>1</sup> are the same or different at each instance and are each H or an aliphatic or aromatic hydrocarbon radical having from 1 to 20 carbon atoms;
- L<sub>1</sub> is an uncharged, monodentate ligand;
- L<sub>2</sub> is a monoanionic, monodentate ligand;
- L<sub>3</sub> is an uncharged or mono- or dianionic bidentate ligand;
- X' is H, Cl, Br or I, with the proviso that at least one X' per formula is selected from Cl, Br or I;
- Z is identically F, Cl, Br, I, O-R<sup>1</sup>, S-R<sup>1</sup> or N(R<sup>1</sup>)<sub>2</sub>;
- a is 0, 1, 2, 3 or 4;
- b is 0, 1, 2 or 3;
- m is 0, 1 or 2 and
- n is 1 or 2.

22. (Previously presented) A polymer as claimed in claim 20 characterized in that the polymer contains repeat units taken from polyfluorenes, polyspirobifluorenes, poly-para-phenylenes, polycarbazoles or polythiophenes.

23. (Previously presented) A polymer as claimed in claim 20, characterized in that the polymer is a homo- or copolymer.
24. (Previously presented) A polymer as claimed in claim 20, characterized in that the polymer is soluble in organic solvents.
25. (Previously presented) An electronic component comprising at least one compound as claimed in claim 1.
26. (Previously presented) An electronic component comprising at least one polymer as claimed in claim 20.
27. (Cancelled)
28. (Previously presented) An electronic component as claimed in claim 25, characterized in that it comprises organic or polymeric light-emitting diodes (OLEDs or PLEDs), organic integrated circuits (O-ICs), organic field-effect transistors (OFETs), organic thin-film transistors (OTFTs), organic solar cells (O-SCs) or else organic laser diodes (O-lasers).